



WOOD HYBRID PROFILES HANDLING GUIDE

Geolam[®]
Architectural Eco-Technology

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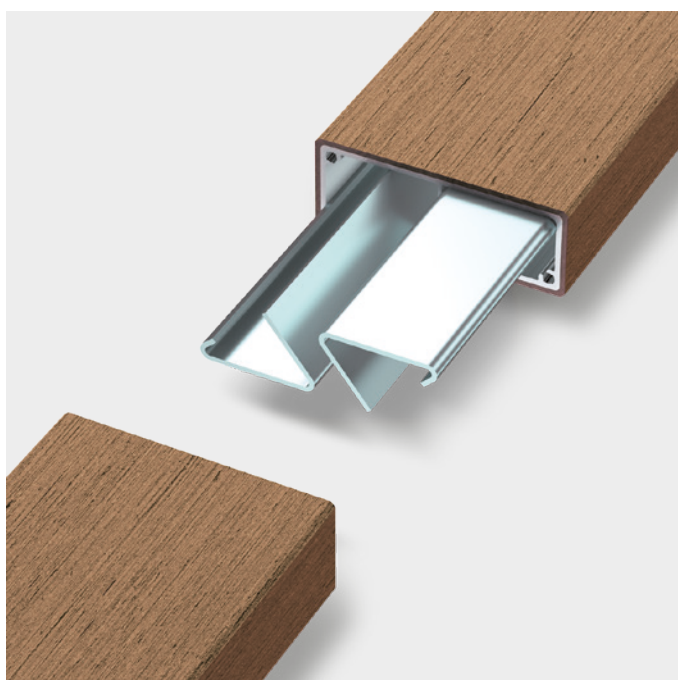
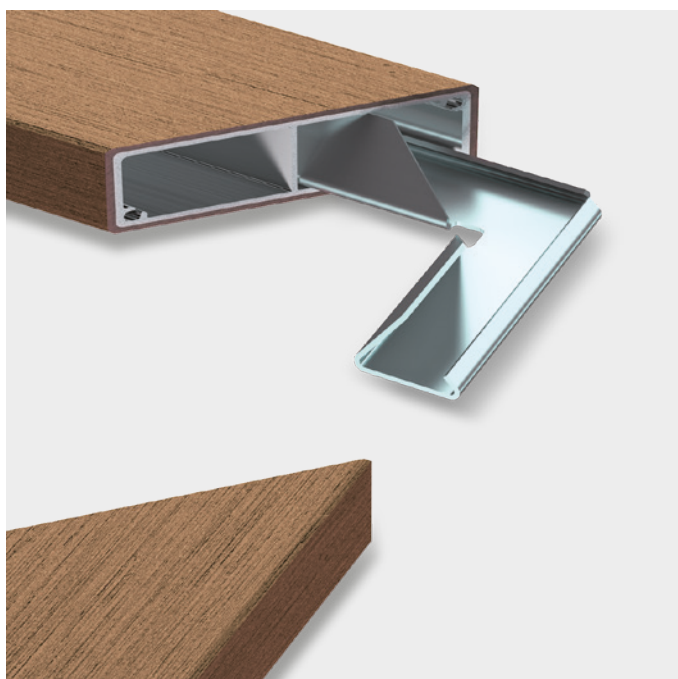
Profiles and accessories summary

PROFILES	DIMENSIONS	WEIGHTS	END CAPS		CONNECTORS	
			ASA resin	WPC	Straight (180°)	Corner (90°)
Rondo 3002	Diameter : 50 mm 2 in	1 kg/lm 0.67 lb/ft				
Rondo 3003	Diameter : 56 mm 2¼ in	1.07 kg/lm 0.72 lb/ft				
Rondo 3004	Diameter : 63 mm 2½ in	2.51 kg/lm 1.70 lb/ft		●		
Vertigo 5010	186 x 13 mm 7¼ x ½ in	1.29 kg/lm 0.87 lb/ft				
Soleo 6008	52 x 32 mm 2 x 1⅝ in	0.8 kg/lm 0.55 lb/ft	●	●	●	●
Soleo 6009	100 x 30 mm 4 x 1¼ in	1.35 kg/lm 0.90 lb/ft		●	●	●
Soleo 6010	128 x 53 mm 5 x 2 in	2.45 kg/lm 1.64 lb/ft	●	●	●	
Soleo 6012	103 x 32 mm 4 x 1¼ in	1.35 kg/lm 0.90 lb/ft	●			
Soleo 6017	93 x 43 mm 3⅝ x 1⅝ in	1.65 kg/lm 1.11 lb/ft	●			
Diameo 6018	120 x 30 mm 4¾ x 1¼ in	1.9 kg/lm 1.27 lb/ft	●			
Soleo 6026	60 x 40 mm 2⅜ x 1½ in	1.1 kg/lm 0.74 lb/ft	●			
Soleo 6027	40 x 30 mm 1½ x 1¼ in	0.75 kg/lm 0.50 lb/ft	●			
Soleo 6029	60 x 30 mm 2⅜ x 1¼ in	1.1 kg/lm 0.74 lb/ft	●	●		
Soleo 6030	80 x 30 mm 3⅜ x 1¼ in	1.25 kg/lm 0.84 lb/ft	●	●	●	●
Soleo 6031	126 x 28 mm 5 x 1⅝ in	1.65 kg/lm 0.67 lb/ft	●		●	
Soleo 6033	200 x 35 mm 8 x 1⅜ in	3.3 kg/lm 2.21 lb/ft	●			
Soleo 6034	105 x 53 mm 4⅜ x 2 in	1.9 kg/lm 1.27 lb/ft	●		●	
Careo 7011	52 x 52 mm 2 x 2 in	1.38 kg/lm 0.93 lb/ft	●			
Careo 7014	88 x 88 mm 3½ x 3½ in	2.7 kg/lm 1.81 lb/ft	●	●		
Careo 7015	45 x 45 mm 1¾ x 1¾ in	0.88 kg/lm 0.59 lb/ft	●	●		
Careo 7016	120 x 120 mm 4¾ x 4¾ in	3.95 kg/lm 2.68 lb/ft	●			
Careo 7031	45 x 45 mm 1¾ x 1¾ in	0.82 kg/lm 0.55 lb/ft	●	●		
Careo 7035	87 x 87 mm 3½ x 3½ in	2.25 kg/lm 1.51 lb/ft	●	●		

| Corner and straight connectors

These cleverly designed splices are inserted into the interior of the hybrid profiles. They allow for the assembly of profiles

by ensuring proper alignment or to create a perfectly finished 90° angle.



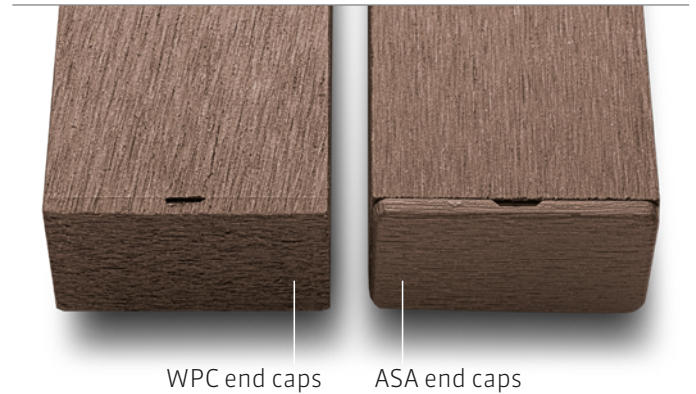
WPC and ASA end caps installation |

The end caps **have to be glued** to the profile. The end caps have four openings to allow for weeping of condensation – these must not be blocked or closed up. For a perfect aesthetic, wood composite end caps (WPC) can be adapted in size to the profile or showcased by an appropriate additional sanding by hand.

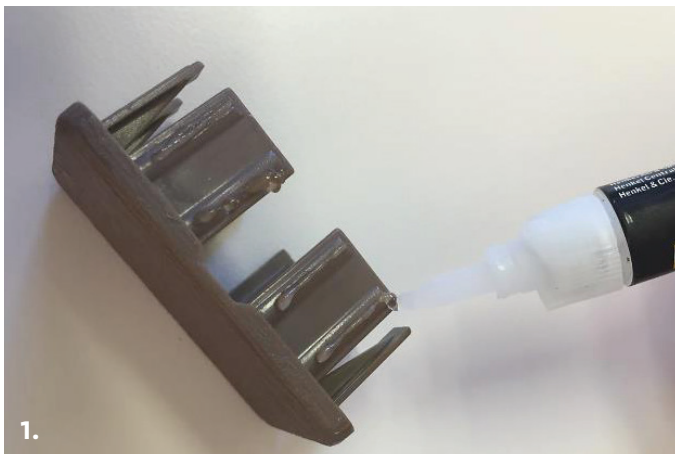
End caps **must be glued** to the WHS profile.

Use glue like **Sikaflex®** : Crystal Clear or **3M®** : DP- 8010 :

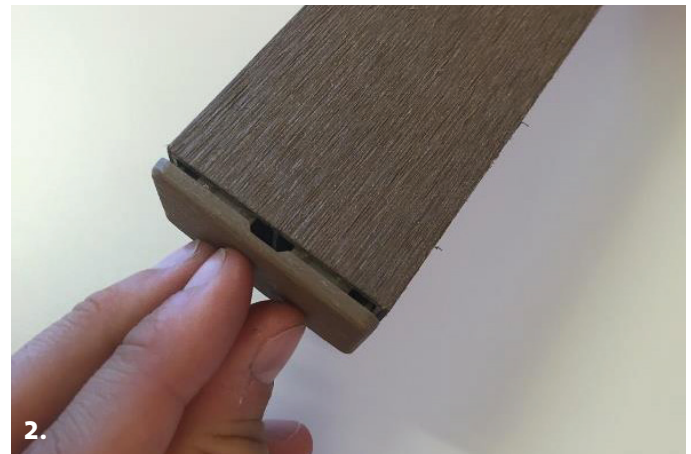
- Designed to glue plastic (PP and PE) with Aluminum
- Moisture resistant
- Made for extreme temperature fluctuations (-30°C to +75°C)
- Transparent



Fix the end cap by following the 4 steps below



1. Ensure that the surfaces of the clip and the aluminum are clean. Apply one drop of quick-drying glue to each side of the end cap.



2. Insert the cap into the end of the WHS profile and verify that NO adhesive has come out on the sides. If so, clean quickly.



3. Press on the end cap with fingers and hold for about 5 seconds. Make sure that there is no gap between the WHS profile and the end cap.



4. The end cap is fixed.

| Processing Methods

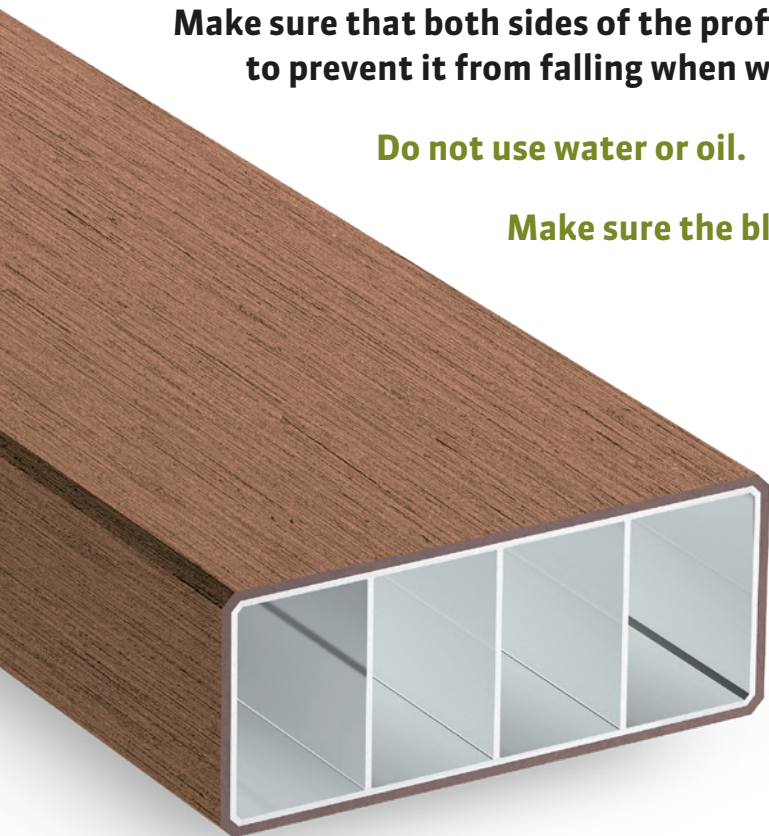
The same tools as for other Geolam profiles can be used to cut, drill and bend Geolam Soleo profiles.

Carry out all work on surfaces that are flat without any bumps.

Make sure that both sides of the profile are firmly supported to prevent it from falling when working on it.

Do not use water or oil.

Make sure the blade does not exceed 60 degrees Celsius.



1. Cutting

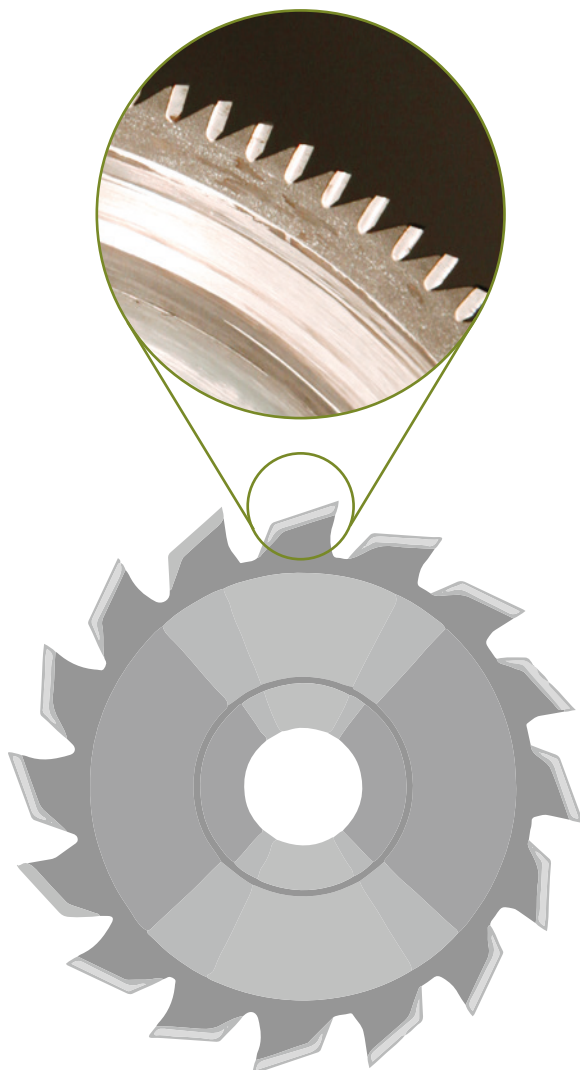
- Use motorized tools and specialized aluminum-cutting chip saws when cutting Geolam Soleo Profiles.
- Do not use grinders or chainsaws for cutting.
- Not using a suitable aluminum-cutting chip saw could result in deformation, cracks and/or peeling of the product.

Aluminium Cutting Chip Saw

Base Metal: Tool Steel

Chips: Carbide

Teeth: Maximum 2 teeth per centimeter



Examples of Tools and Equipment

CIRCULAR SAW



TABLETOP SAW



CIRCULAR SAW BENCH

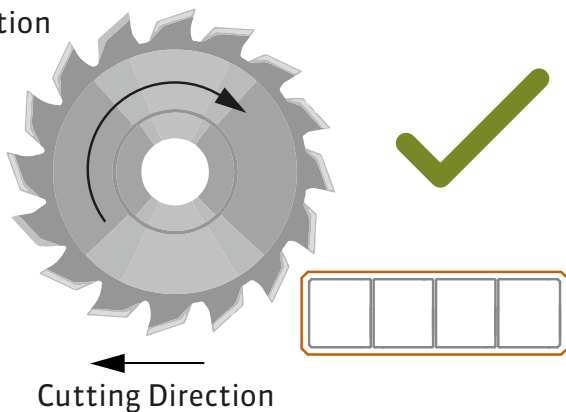


Cutting Speed :
maximum 2 meters per minute.

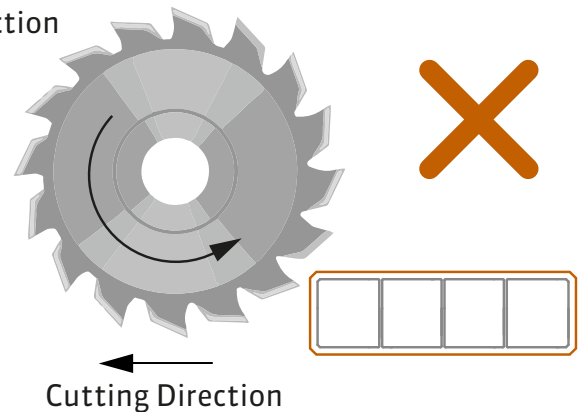
Cutting Direction

- To cut, pull the product in the same direction as the saw rotation, as shown in the illustration below.
- Cutting in the opposite direction may cause the product to move, which may produce an untidy cut in addition to being dangerous for the operator.

Rotational
Direction



Rotational
Direction



2. Hole-drilling

Examples of Tools and Equipment

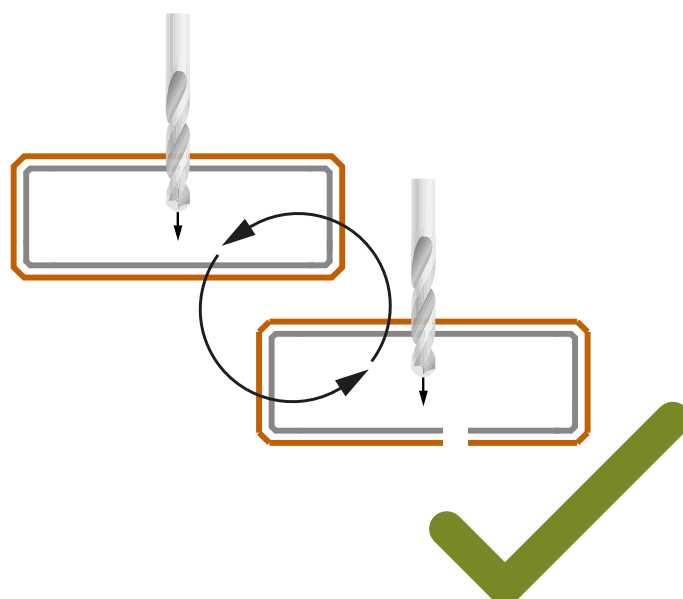
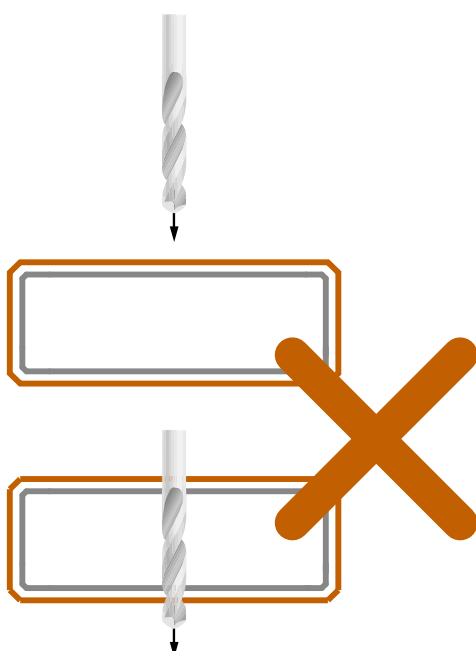


Tabletop Drilling Machine



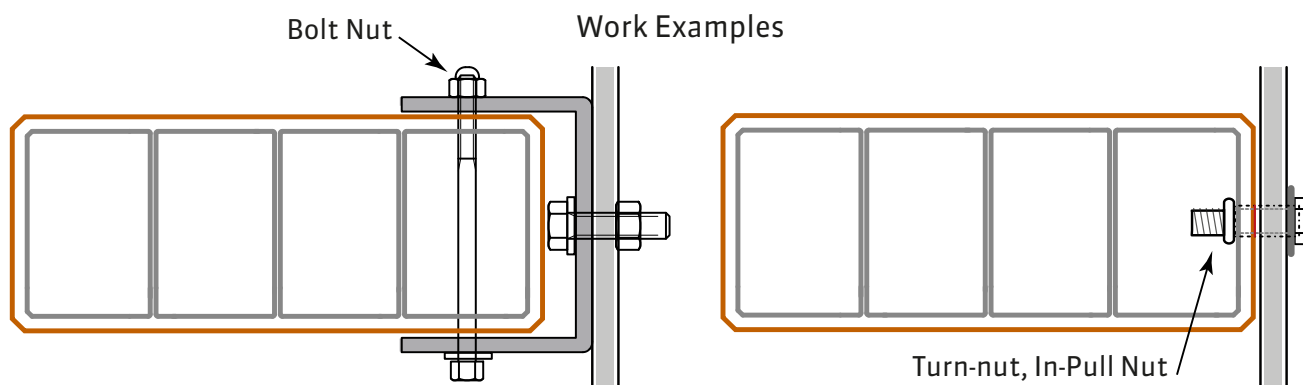
Motorized Screwdriver

- Use drills for use with metal or timber and make the holes with a tabletop drilling machine or a motorized screwdriver.
- Drilling holes through both sides of the material may result in the formation of burrs or chips when the drill exits the rear side.
- Therefore, test the machine on scrap material before starting work.
- If burrs do appear, drill through from both sides independently.
- Depending on how the burrs are formed, the surface layer could be chipped to reveal the aluminum core beneath.



3 Stoppers

- Fix bolt-nuts, in-pull nuts, and turn-nuts firmly in place (recommended at 3.5Nm).
- Over-tightening may result in deformities, cracks and/or peeling appearing on the surface layer.
- Consult a local building code for joint span and bolt size requirement.
- Fixing the product in place with tapping screws or drill screws is not recommended.
- Nails must also not be used for fixing.
- Check the strength requirement prior to fixing to joint.



4 Sanding

- All profiles are delivered facing the same direction they were sanded in.
- Mount the profiles facing the same direction in order to keep an identical aspect across all profiles.
- Or, mount profiles facing different directions in order to achieve different shades caused by sun beams reflecting from different angles.
- Refer to the marks inside the profiles that indicate the direction of sanding.

5 Post-Processing Maintenance

- Clear away all cutting dust with an air blower, and make sure the dust does not get caught between products when they are stacked.
- Remove all post-processing burrs with sandpaper.
- Remove all soiling with a neutral detergent such as soap water.
- If a neutral detergent does not successfully remove the soiling, or when differences in luster caused by rubbing exist, use Nr. 24 to Nr. 40 sandpaper.
- Rub in a single direction (lengthwise) and finish it so that it looks the same as other surfaces.

6 Miscellaneous

The linear thermal expansion coefficient

- The linear thermal expansion coefficient for Geolam Soleo profiles is the same as for aluminium: 2.3×10^{-5} mm (20-100°C).
- Geolam Soleo profile expansion (per meter) = expansion coefficient x temperature difference (°C) x product length (mm).
- Thus, for a temperature difference of 40°C a Soleo profile expands by 0.92 mm per meter.

Storage

- Do not position the product in an upright position but store it indoors on a flat area.
- Cover the product with a protective sheet if it must be stored outdoors to prevent contact with water.
- However, the product must not be completely sealed-in when covered with a protective sheet.

| Before and during installation

Beware of the sanding direction.

Geolam boards are sanded in a particular direction, giving them an 'up' and 'down' orientation.

Each board is marked inside to show its orientation (see picture).

The boards need to be installed consistently in order to ensure a uniform appearance.

Please read the instructions apposed on the profiles.



Installing profiles |

1. Blind rivet nut



Drill a hole in the desired location of the profile, the size is the dimension of the outer diameter of the screw nut, plus the specified tolerance.



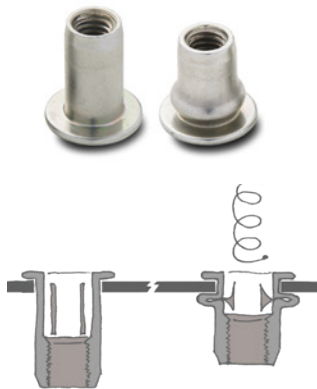
Check the diameter of the aperture, the blind nut should fit snugly.



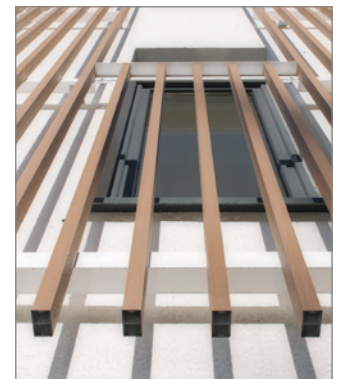
Screw the blind nut on the tool, enter and implement the tool in order to secure the nut to the profile.



The nut is in place, the profile can be screwed to a support or to another section.



A blind rivet nut before and after the establishment. The region without the thread is getting tightened during the installation and forms the counter-holder. This allows a concealed installation and the preparation of the profiles at the factory. This will reduce the time spent on the construction site.



Example of finalized assembly.

2. By screwing



Thanks to the aluminium core, the profiles may also be directly screwed under the responsibility of the company in charge of installation.



Example of finalized assembly.

3. After installation

It is necessary to wash the profiles with water (using high pressured water is OK) to remove the sanding residues.

| How to repair a surface scratch



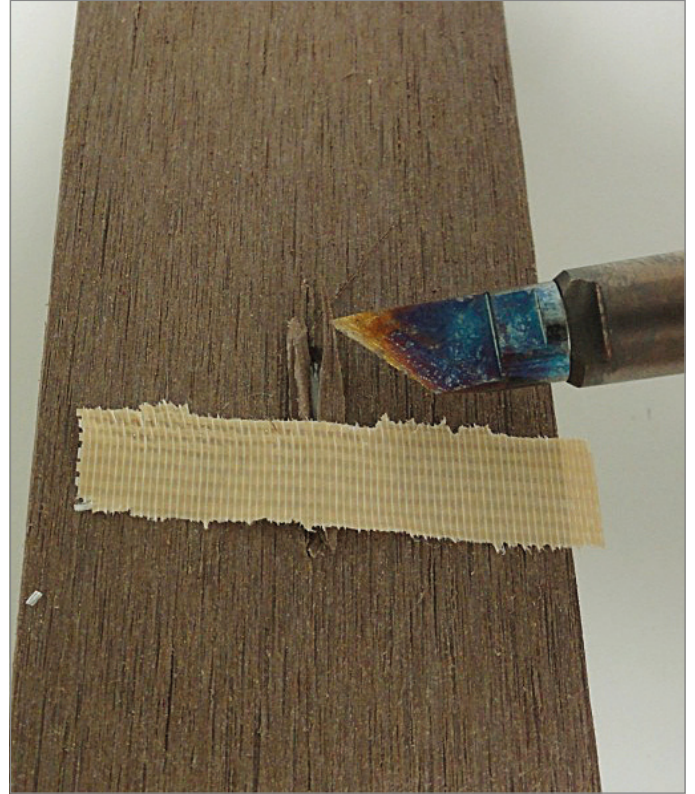
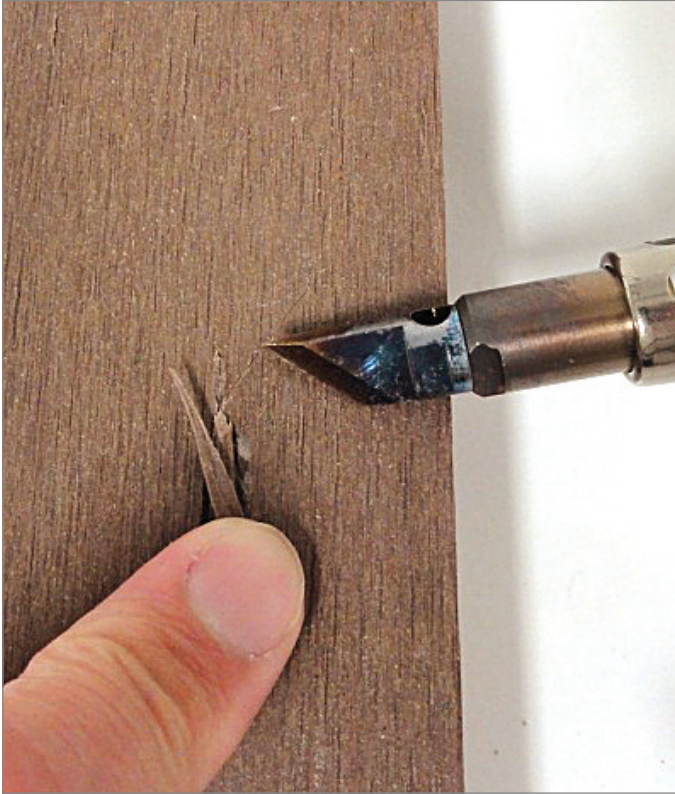
Step 1/5

Collect some composite material on a profile, warm up the soldering iron.

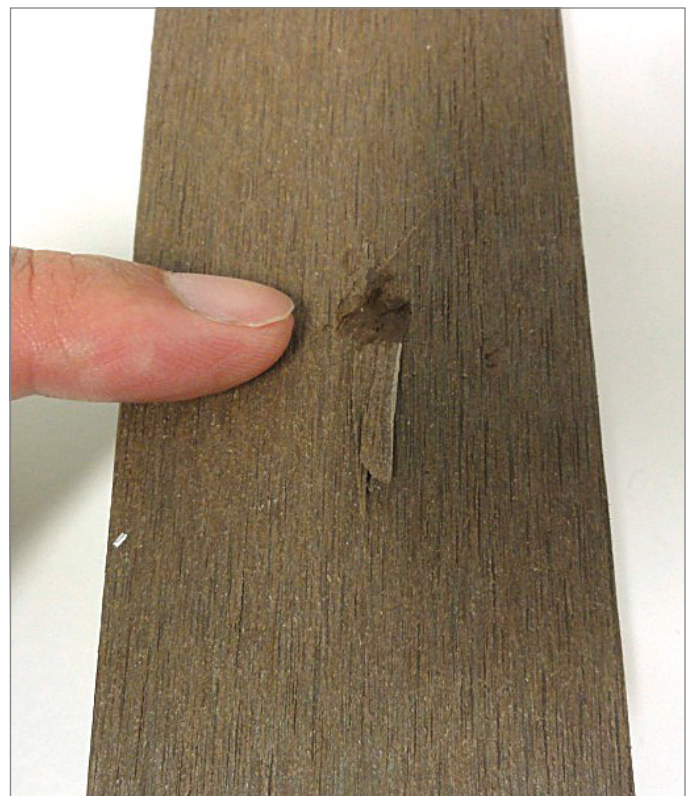
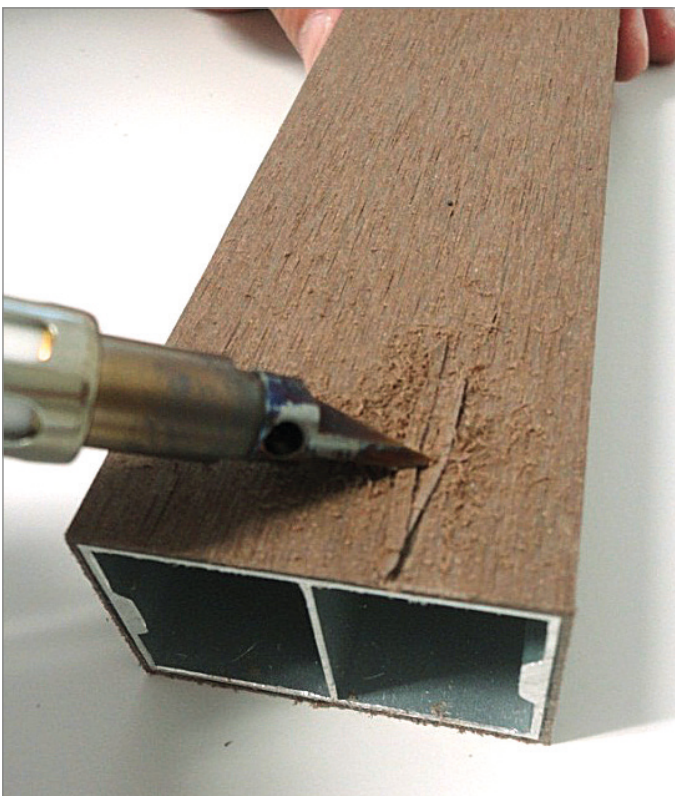


Step 2/5

Put the composite wood on the scratch. Hold it with your finger or use an adhesive tape.

**Step 3/5**

Spread the composite wood on the scratch using a soldering iron, the wood fiber sticks.



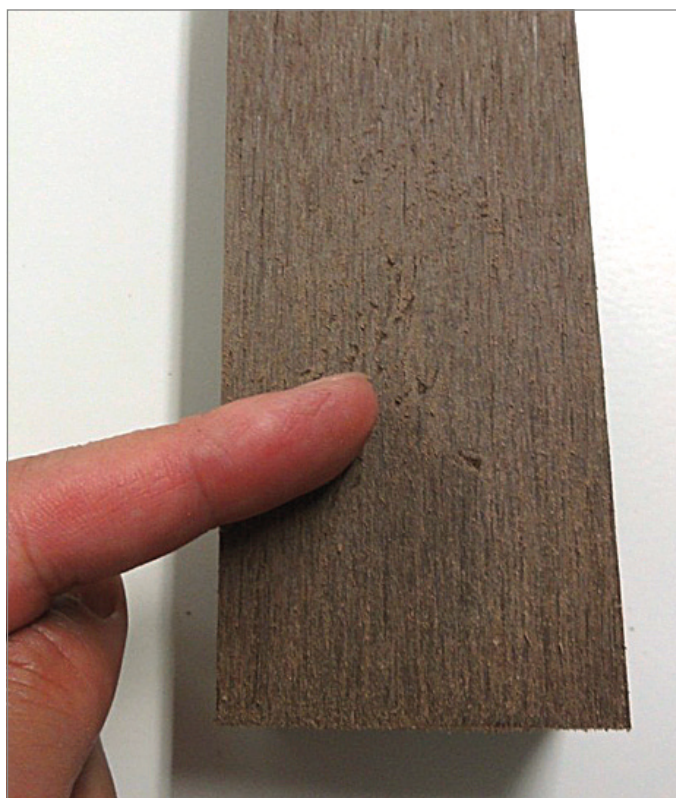
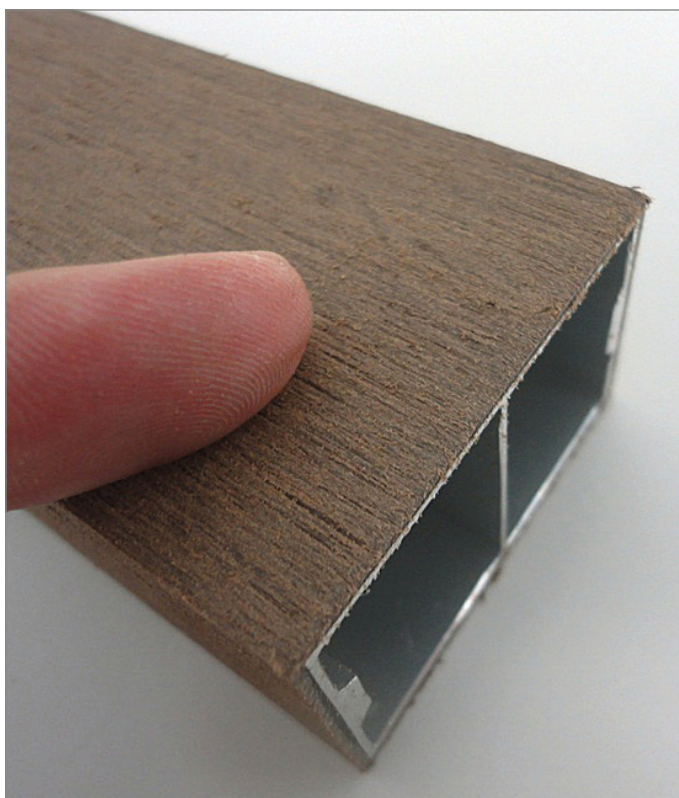
Step 4/5

Aspect before sanding.



Step 5/5

Use a 40 or 60 grit sandpaper for sanding.





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